

State of CASCO BAY

PRESUMPSCOT HIGHLIGHTS



Every five years Casco Bay Estuary Partnership reports on the health of Casco Bay and its watershed. Based on the best available data, the State of Casco Bay report analyzes indicators of ecological changes in water quality, habitat, and more. Presented here are key findings for the Presumpscot region.

View the full report: cascobayestuary.org/state-of-casco-bay



Indicator I: AQUATIC CONNECTIVITY

CBEP documented 573 severe barriers and another 551 potential barriers to fish passage in the Casco Bay watershed. Dams and problem culverts impede seasonal movement of fish, access to spawning habitat, and natural stream processes. See map below. Impaired waters are those that do not meet designated criteria specific to the waterbody's assigned class. In the Presumpscot region, impairment is often attributed to water quality impacts associated with dams or agricultural practices. See map below.

Indicator D: INLAND WATER QUALITY



Water quality monitoring in the Presumpscot River watershed suggests that dissolved oxygen and fecal bacteria levels usually meet designated criteria in the main stem, but several tributaries have persistently low dissolved oxygen levels and high *E.coli* counts. See map below.



State of CASCO BAY



PRESUMPSCOT HIGHLIGHTS

Indicator H: NUTRIENTS



High levels of nutrients in aquatic ecosystems can sometimes fertilize excessive growth of algae. Estimated nitrogen loads from rivers and streams entering Casco Bay are about 440 metric tons per year. The Bay's two largest tributaries, the Presumpscot and Royal Rivers, account for about two-thirds of that.

Communities in the Presumpscot region stem from changes in land use, particularly the conversion of undeveloped areas such as fields and forests to pavement and other



Saco Bay Watershed Boundary

Permanent Conservation Lands

Town Boundary

Watersheds



Indicator A: POPULATION & LAND USE

Town	2018 Population	Average Annual Growth 2000-18
Buxton	8,310	0.64%
Gorham	17,651	1.38%
Westbrook	18,974	0.97%
Windham	18,439	1.32%

are experiencing some of the highest population growth rates in our area. Many environmental stressors affecting the Bay impervious surfaces.

SPOTLIGHT

Stewardship

Presumpscot Regional Land Trust (PRLT), with funding support from CBEP, monitors water quality

throughout the Presumpscot and Stroudwater River watersheds. Trained volunteers monitor 40 sites from mid-May to September, providing a valuable long-term dataset at Maine Department of Environmental Protection.



University of Southern Maine scientists collaborate with PRLT volunteers to count alewives swimming into Highland Lake, helping to document anadromous fish returns in the Presumpscot watershed.

Sustainability

Westbrook and Windham are taking proactive steps toward climate resilience. Both communities have established a climate preparedness committee and a sustainability staff position. In Westbrook, the

Environmental Improvement Corporation's mission is "to identify, protect, preserve and improve environmental resources within the City of Westbrook" and "to balance the goal of environmental stewardship



with responsible economic development within the City of Westbrook." The responsibility of Windham's Natural Resources Advisory Committee is to "Identify problems, recommend solutions, and propose policy goals for consideration by the Town Council which will preserve, protect and enhance the community's natural resources."

Protecting Water Quality in a Growing Region

Some of the fastest growing towns in the Casco Bay watershed are in this region. As people move in, new construction leads to changes in land use that degrade water quality, but the impacts can be minimized if done with care. Local ordinances that strengthen wetland and shoreline protection over state minimums, encourage redevelopment and compact subdivisions, and require use of green infrastructure are important. Land conservation work also helps protect water quality while preserving access to open space for future generations.

ON THE HORIZON

Removing Dams Responsibly

Advocacy by Friends of the Presumpscot River and other partners has resulted in removal of two dams and construction of two fishways, leading to restoration of access to river herring spawning habitat and increased runs of anadromous fish. Additional barriers remain, including other mainstem dams, tributary dams, and poorly designed culverts. Restoring access to historic habitat for migratory species will take years of work, not only establishing fish passage at the sites of existing dams, but taking on smaller projects such as replacing problem culverts.

Expanding Stream Protection

Mill Brook, a tributary of the Presumpscot River located in Westbrook, features the largest annual migration of alewives in the Casco Bay watershed. Land donations and bargain sales by area residents are protecting an entire streamside corridor of forested well as public access. Alewives can be seen migrating in May and June while hiking the six-mile Mill Brook Preserve trail. Protecting this land conserves ecosystem diversity within Maine's most heavily urbanized metropolitan area.

VIEW THE FULL REPORT: CASCOBAYESTUARY.ORG/STATE-OF-CASCO-BAY